

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 October 2001 (04.10.2001)

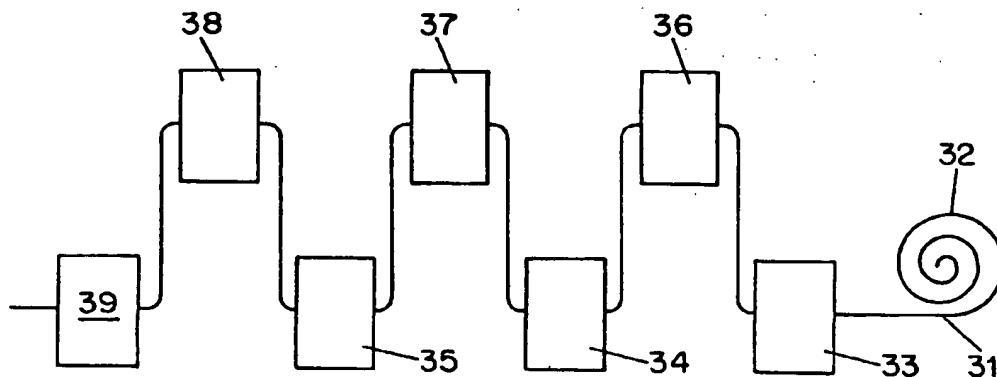
PCT

(10) International Publication Number
WO 01/073109 A3

- (51) International Patent Classification⁷: C12Q 1/00, [GB/GB]; 5 Stratherrick Gardens, Inverness 1V2 4LX (GB).
G01N 27/28, 27/30, 33/487, 27/403
- (21) International Application Number: PCT/US01/10097
- (22) International Filing Date: 28 March 2001 (28.03.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 09/537,599 28 March 2000 (28.03.2000) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/537,599 (CON)
Filed on 28 March 2000 (28.03.2000)
- (71) Applicant (for all designated States except US): DIA-BETES DIAGNOSTICS, INC. [US/US]; 51 Sawyer Road, Suite 150, Waltham, MA 02453 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DAVIES, Oliver, William, Hardwicke [GB/GB]; 15 Drummond Circus, Inverness Circus, Inverness 1V2 4QP (GB). MCALEER, Jerome, Francis [GB/GB]; 52 Nobles Close, Grove Wantage OX12 0NR (GB). YEUDALL, Robert, Malcolm
- (74) Agents: SHAY, Bernard, E. et al.; LifeScan, Inc., 1000 Gibraltar Drive, Milpitas, CA 95035-6312 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
20 February 2003
- (15) Information about Correction:
Previous Correction:
see PCT Gazette No. 05/2002 of 31 January 2002, Section II

[Continued on next page]

(54) Title: CONTINUOUS PROCESS FOR MANUFACTURE OF DISPOSABLE ELECTRO-CHEMICAL SENSOR



(57) Abstract: Sensors formed from a substrate, an electrode layer and at least a first reagent layer are manufactured by transporting a continuous web of the substrate past at least two print stations, and printing the electrode layer and the first reagent layer on the substrate. One of the print stations prints the electrode layer on the continuous web of substrate, and the other of the print stations prints the first reagent layer on the continuous web of substrate as it is transported past the print stations. Additional print stations may be included for the printing of insulation layers, glue prints and the like. The order of printing will depend on the structure desired for the sensor, although the electrode layer(s) will frequently be deposited before the reagent layer(s).

WO 01/073109 A3

WO 01/073109 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Interr Application No
PCT/US 01/10097

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/00 G01N27/28 G01N27/30 G01N33/487 G01N27/403

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 43075 A (GIRAULT HUBERT HUGUES ;LAGGER GREGOIRE (CH); LOYALL UWE (CH); METR) 1 October 1998 (1998-10-01)	1-14, 19, 20
Y	the whole document	15-18
Y	US 5 679 311 A (SCHUESSLER RUDOLF ET AL) 21 October 1997 (1997-10-21) column 1, line 62 -column 4, line 21	15-18
A	US 4 218 421 A (MACK JOHN C JR ET AL) 19 August 1980 (1980-08-19) column 2, line 48 -column 4, line 65	14-18

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

8 July 2002

Date of mailing of the international search report

15/07/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Joyce, D

INTERNATIONAL SEARCH REPORT

Interv Application No
PCT/US 01/10097

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9843075	A	01-10-1998	EP WO 0968416 A1 9843075 A1	05-01-2000 01-10-1998
US 5679311	A	21-10-1997	DE 4326339 A1 EP 0637749 A2 JP 2610109 B2 JP 7077528 A US 5609823 A	09-02-1995 08-02-1995 14-05-1997 20-03-1995 11-03-1997
US 4218421	A	19-08-1980	NONE	